MAINE POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT

AND

MAINE WASTE DISCHARGE LICENSE

FACT SHEET

Date: **February 14, 2003**
Revised: **April 25, 2003**

PERMIT NUMBER: **ME0100072**
LICENSE NUMBER: **W002679-5M-C-R**

NAME AND ADDRESS OF APPLICANT:

City of Brewer
80 N. Main Street
Brewer, Maine 04412

COUNTY: **Penobscot County**

NAME AND ADDRESS WHERE DISCHARGE OCCURS:

Brewer Water Pollution Control Facility
37 Oak Street
Brewer, Maine 04412

RECEIVING WATER/CLASSIFICATION: **Penobscot River/Class B**

COGNIZANT OFFICIAL AND TELEPHONE NUMBER: **Mr. Kenneth Locke**
(207) 989-5417

1. APPLICATION SUMMARY

a. Application: The applicant has applied to the Department for renewal of Department Waste Discharge License (WDL) #W002679-46-B-R which was issued on April 17, 1997 and expired on April 17, 2002. The 4/17/97 WDL authorized the discharge of up to a monthly average flow of 5.19 million gallons per day (MGD) of secondary treated sanitary waste waters and an unspecified quantity of excess combined sanitary and storm

1. APPLICATION SUMMARY (cont'd)

water receiving primary treatment only from a municipal waste water treatment facility to the Penobscot River, Class B, in Brewer, Maine. The 4/17/97 WDL also authorized the discharge of untreated combined sanitary and storm water from seven (7) combined sewer overflow (CSO) outfalls to the Penobscot River in Brewer.

On January 12, 2001, the Department received authorization from the U.S. Environmental Protection Agency (EPA) to administer the National Pollutant Discharge Elimination System (NPDES) permitting program in Maine. From this point forward, the program will be referenced as the MEPDES permit program. NPDES permit #ME0100072 last issued by the EPA on September 30, 1998 and expired on March 31, 2002, will be replaced upon issuance of a final MEPDES permit. Once replaced, all terms and conditions of the NPDES become null and void.

2. PERMIT SUMMARY

a. Permit Summary: **This permitting action is similar to the 4/17/97 WDL action in that it is;**

Secondary Treated Waste Waters:

1. Carrying forward the monthly average flow limit of 5.19 MGD.

2. Carrying forward the monthly average and weekly average technology based mass and concentration limits for biochemical oxygen demand (BOD_5) and total suspended solids (TSS).

3. Carrying forward the reporting requirement for the daily maximum mass loadings for BOD_5 and TSS.

4. Carrying forward the monthly average and daily maximum water quality based concentration limits for *E. coli* bacteria.

5. Carrying forward the daily maximum technology based concentration limit for total residual chlorine.

6. Carrying forward the surveillance and screening level whole effluent toxicity (WET) and chemical specific (priority pollutant) testing.

Primary Treated Waste Waters:

7. Carrying forward monthly average and or daily maximum reporting requirement for mass and concentration for flow, surface overflow rates, number of discharge days per month and percent removal rates for BOD5 and TSS.

2. PERMIT SUMMARY (cont'd)

Secondary Treated Waste Waters:

This permitting action is different than the 4/17/97 WDL action in that it is;

8. Revising the disinfection season from May 10th – September 30th to May 15th – September 30th to be consistent with state law.

9. Establishing a daily maximum best practicable treatment (BPT) limit of 0.3 ml/L for settleable solids and deleting the monthly average concentration reporting requirement.

10. Revising the daily maximum BPT pH range limit from 5.5 – 8.5 standard units to 6.0 – 9.0 standard units based on a new Department regulation.

11. Establishing a requirement for achieving a minimum of 85% removal for BOD5 and TSS.

12. Requiring that surveillance level (1/Year) whole effluent toxicity (WET) testing and chemical specific testing to be conducted in a different calendar quarter of each year for the first four years of the permit.

13. Establishing a seasonal (June 1 – September 30) monitoring and reporting requirement for total phosphorus.

Primary Treated Waste Waters:

14. Revising the disinfection season from May 10th – September 30th to May 15th – September 30th.

15. Deleting the *E. coli* bacteria reporting requirement as it serves no purpose.

b. History – The most current relevant licensing/permitting actions include:

February 28, 1989 - The Department issued WDL #W002679-46-A-R.

February, 1992 - The City of Brewer and the Department entered into an Administrative Consent Agreement and Enforcement Order for violations of parameters in the 2/28/89 WDL. In addition, the Consent Agreement ordered the City to continue to develop and implement a prioritized, long term program for evaluation and abatement of combined sewer overflows (CSO) resulting in the submission of a Master Plan to the Department.

June, 1993 - The City submitted a CSO Master Plan entitled "Sewer System Master Plan for CSO Abatement" to the Department as required in the 2/92 Consent Agreement.

2. PERMIT SUMMARY (cont'd)

March 28, 1994 - The City submitted a document entitled, "City of Brewer Waste Water Treatment Facility Septage Management Plan" to the Department.

April 12, 1995 – The Department and the EPA approved the CSO Master Plan originally submitted in June of 1993.

February 21, 1997 - The City submitted the High Flow Management Plan for the waste water treatment facility.

April 17, 1998 – The Department issued WDL #W002679-46-B-R for a five-year term.

September 30, 1998 - The EPA issued a renewal of NPDES #ME0100072 for a four and one-half year term.

May 23, 2000 – The Department adminstartively modified the 4/17/98 WDL by establishing interim monthly average and daily maximum concentration limits for the discharge of mercury.

January 2, 2002 – The City submitted an application to the Department for the renewal of
WDL #W002679-46-B-R.

c. Source Description: The waste water treatment facility receives sanitary waste water flows from approximately 10,000 residential, commercial and industrial users in the City of Brewer. The largest industrial user of the system is Eastern Fine Paper Inc. which is located adjacent to the waste water treatment facility. Eastern Fine Paper Inc. is a non-integrated paper mill with a production of approximately 200 tons per day of fine paper. The City has established monthly average and daily maximum local limitations of 1.24 MGD and 1.31 MGD respectively, on Eastern Fine Paper's process waste water conveyed to the City's treatment plant. Cooling waters and boiler blowdown from the mill are discharged directly to the Penobscot River via outfalls pursuant to MEPDES #ME0000086 (WDL #W002522) last issued by the Department on May 1, 2001.

The Department has authorized the City to accept up to 1,000,000 gallons per year of landfill leachate from a closed municipal landfill for the City of Brewer.

The City's sewer collection system is approximately 50 miles in length and is approximately 70% combined and 30% separated. There are seven (7) remaining permitted CSOs associated with the collection system and are listed in Special Condition L*, Combined Sewer Overflows (CSO),* of this permitting action.

2. PERMIT SUMMARY (cont'd)

d. Waste Water Treatment: The waste water treatment facility is designed to provide a secondary level of treatment for a sustained flow of 5.19 MGD. Secondary treatment for the sanitary portion of waste waters received at the facility is provided by two aerated grit chambers, grinding, two primary clarifiers, an activated sludge system with two aeration basins, four secondary clarifiers and disinfection by way of a chlorine contact chamber. Effluent is measured by a parshall flume prior to being discharged to the Penobscot River via a ductile iron pipe measuring thirty (30) inches in diameter and is considered a bank outfall by the Department.

Industrial process waste waters receive a primary level of treatment via grinding and clarification prior to combining with the municipal sanitary waste water stream in the secondary distribution box. The combined waste stream then receives secondary treatment by way of the aforementioned activated sludge process and secondary clarification. (See Attachment A of this Fact Sheet for a schematic).

A 1998 upgrade of the treatment facility (referred to as Phase III) increased the preliminary, primary, and disinfection systems at the plant to receive up to a daily maximum flow of 13.0 MGD and a peak hourly flow of 14.5 MGD (12.0 MGD from the municipal collection system plus 2.5 MGD from the industrial stream). The upgrade included the addition of a primary clarifier which allowed one primary clarifier to be dedicated to the industrial waste stream, installation of a grit chamber and grinders on the sanitary waste stream, reconfiguration of the primary distribution box and aeration distribution box, the addition, expansion and reconfiguration of the chlorine contact chamber.

As part of its combined sewer overflow abatement program, the 1998 upgrade of the facility enables the City to treat a portion of the excess combined sewer flows at the waste water treatment facility. To the extent possible, combined sewer flows receive secondary treatment along with normal dry weather flows. However, in order to prevent damage to the treatment system and/or upsetting the secondary biological process, the volume of water receiving secondary treatment is limited. The force main from the three main pump stations (Hardy St., South Main St., and Brewer Cove) to the treatment plant is capable of delivering 12 MGD to the treatment plant. The maximum combined sewer flow receiving secondary treatment is a peak hourly rate of 9.27 MGD. However, due to seasonal variations and the need to maintain stable treatment for dry weather flows, the amount of combined sewer flow receiving secondary treatment may vary at any given time. Flows received at the treatment facility exceeding a sustained flow rate of 3,604 gallons per minute (5.19 MGD) or peak hourly flow rate of 6,438 gallons per minute of (9.27 MGD) receive primary treatment via grit removal, grinding, measurement and primary clarification. The primary treated portion of the total flow is then combined with secondary treated waste water and the combined waste stream is disinfected prior to discharge to the Penobscot River.

3. CONDITIONS OF PERMITS

Maine law, 38 M.R.S.A. Section 414-A, requires that the effluent limitations prescribed for discharges require application of best practicable treatment, be consistent with the U.S. Clean Water Act, and ensure that the receiving waters attain the State water quality standards as described in Maine's Surface Water Classification System. In addition, Maine law, 38 M.R.S.A., Section 420, and Department Regulation Chapter 530.5, *Surface Water Toxics Control Program* requires the regulation of toxic substances at the levels set forth for Federal Water Quality Criteria as published by the U.S. Environmental Protection Agency pursuant to the Clean Water Act.

4. RECEIVING WATER STANDARDS

Maine law, 38 M.R.S.A., Section 467(7)(A)(6) indicates the Penobscot River main stem, from the Maine Central Railroad bridge in Bangor to a line extended in an east-west direction from the confluence of Reeds Brook in Hampden, is classified as a Class B waterway. The Legislature finds that the free-flowing habitat of this river segment provides irreplaceable social and economic benefits and that this use must be maintained. Maine law, 38 M.R.S.A., Section 465(3) describes standards for classification of Class B waters.

5. RECEIVING WATER CONDITIONS

The *2002 Integrated Water Quality Monitoring and Assessment Report*, published by the Department states the designated use of fishing (consumption) is impaired in a ten mile segment of the Penobscot River between the Veazie Dam and Reed Brook due to the presence of dioxin and mercury in fish tissue. The Department is not aware of any information that indicates the discharge from the City of Brewer's waste water treatment facility is causing or contributing to the impairment. The only information available is that recent mercury sampling results indicate the discharge contains single digit parts per trillion values and it is unknown at this time if these values are significant enough to contribute to the advisory.

It is noted that ambient water quality sampling conducted by the Department in the summer of 2001 (not during CSO events) indicates that the Penobscot River, several miles below the City of Bangor's and Brewer's outfalls, is not attaining the dissolved oxygen standards of its assigned classification at actual treatment plant flows and loadings. The Department is scheduled to perform a comprehensive evaluation of the data collected and calibrate an existing model of the river in calendar year 2003. If the evaluation and modeling runs determine that at full permitted discharge limits the City of Brewer's discharge is causing or contributing to the non-attainment, this permit will be re-opened per Special Condition M, *Reopening of Permit For Modifications*, to impose more stringent limitations to meet water quality standards.

6. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

Secondary Treated Effluent:

a. Flow: The monthly average flow limitation of 5.19 MGD in the previous licensing action is being carried forward in this permitting action and is representative of the monthly average design flow for the waste water treatment facility.

b. Dilution Factors - The Department established applicable dilution factors for the discharge in accordance with freshwater protocols established in Department Rule Chapter 530.5, *Surface Water Toxics Control Program*, October 1994. With a WDL flow limit of 5.19 MGD the dilution factors are as follows:

Modified Acute[(1)] = 731 cfs $\Rightarrow \frac{(731 \text{ cfs})(0.6464) + (5.19 \text{ MGD})}{(5.19 \text{ MGD})} = 91{:}1$

Acute: 1Q10 = 2,925 cfs $\Rightarrow \frac{(2{,}925 \text{ cfs})(0.6464) + (5.19 \text{ MGD})}{(5.19 \text{ MGD})} = 365{:}1$

Chronic: 7Q10 =3,243 cfs $\Rightarrow \frac{(3{,}243 \text{ cfs})(0.6464) + (5.19\text{MGD})}{(5.19 \text{ MGD})} = 404{:}1$

Harmonic Mean: = 9,101 cfs $\Rightarrow \frac{(9{,}101 \text{ cfs})(0.6464) + (5.19 \text{ MGD})}{(5.19 \text{ MGD})} = 1{,}134{:}1$

Footnotes: (1) Chapter 530.5 (D)(4)(a) states that analyses using numeric acute criteria for aquatic life must be based on 1/4 of the 1Q10 stream design flow to prevent substantial acute toxicity within any mixing zone. The 1Q10 is the lowest one day flow over a ten-year recurrence interval. The regulation goes on to say that where it can be demonstrated that a discharge achieves rapid and complete mixing with the receiving water by way of an efficient diffuser or other effective method, analyses may use a greater proportion of the stream design, up to including all of it. The Department has made the determination that the discharge does not receive rapid and complete mixing with the receiving water, therefore the default stream flow of ¼ of the 1Q10 is applicable in acute statistical evaluations pursuant to Chapter 530.5.

c. Biochemical Oxygen Demand (BOD5) & Total Suspended Solids (TSS): - The previous licensing established monthly and weekly average BOD5 and TSS best practicable treatment (BPT) concentration limits of 30 mg/L and 45 mg/L respectively, that were based on secondary treatment requirements of the Clean Water Act of 1977 §301(b)(1)(B) as defined in 40 CFR 133.102 and Department rule Chapter 525(3)(III). The maximum daily BOD5 and TSS concentration limits of 50 mg/L were based on a Department best professional judgment of BPT. All three concentration limits are being carried forward in this permitting action.

6. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (cont'd)

Secondary Treated Effluent:

As for mass limitations, the previous licensing action established monthly average and weekly average limitations based on a monthly average limit of 5.19 MGD that are being carried forward in this permitting action. The limitations were calculated as follows:

Monthly average: (5.19 MGD)(8.34)(30 mg/L) = 1,298 lbs/day
Weekly average: (5.19 MGD)(8.34)(45 mg/L) = 1,947 lbs/day

No daily maximum mass limitations (report only) for BOD5 or TSS were established in the previous licensing or this permitting action as doing so may discourage the City from treating as much waste water as possible through the secondary treatment system during wet weather events.

This permitting action also establishes a new requirement of 85% removal for BOD and TSS pursuant to Department rule Chapter 525(3)(III)(a&b)(3).

Monitoring frequencies for BOD and TSS of 1/Day are being carried forward from the previous licensing action and are based on Department policy for facilities with a monthly average flow limitation greater than 5.0 MGD.

d. Settleable Solids – The previous licensing action established monthly average and daily maximum concentration reporting requirements. The Department has reconsidered its position on reporting requirements versus numeric limitations. This permitting action is establishing a daily maximum concentration limit of 0.3 ml/L for settleable solids and is considered a Department best professional judgment of BPT for secondary treated waste waters. This permitting action is eliminating the monthly average reporting requirement.

e. *E. coli* bacteria – The previous licensing action established a seasonal Class C monthly average and daily maximum limits of 142 colonies/100 ml and 949 colonies/100 ml, respectively, based on the State of Maine Water Classification Program as established in Maine law, 38 M.R.S.A, §465(3). Being that the main stem of the Penobscot River at and below the discharge from the Brewer facility has been reclassified to Class B, this permitting action is establishing Class B monthly average and daily maximum limits of 64 colonies/100 ml and 427 colonies/100 ml, respectively, based on the State of Maine Water Classification Program as established in Maine law, 38 M.R.S.A, §465(2).

f. Total Residual Chlorine - The previous licensing action established a daily maximum BPT limit of 1.0 mg/L for the discharge. Limits on total residual chlorine (TRC) are specified to ensure that ambient water quality standards are maintained and that BPT technology is being applied to the discharge. The Department imposes the more stringent of the water quality or technology based limits in permitting actions. End-of-pipe water quality based concentration thresholds may be calculated as follows:

6. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (cont'd)

Secondary Treated Effluent:

Parameter	Acute Criteria	Chronic Criteria	Acute Dilution	Chronic Dilution	Acute Limit	Chronic Limit
Chlorine	19 ug/L	11 ug/L	91:1	404:1	1.7 mg/L	4.4 mg/L

Example calculation: Acute – 0.019 mg/L (91) = 1.7 mg/L

In the case of the Brewer facility, the calculated acute water quality based threshold is higher than 1.0 mg/l, thus the BPT limit of 1.0 mg/L is imposed as a daily maximum limit.

g. pH Range- The previous licensing action established a pH range limitation of 5.5 - 8.5 standard units. The limits were based on Maine Board of Environmental Protection Policy regarding the certification of NPDES permits and were considered best practicable treatment limitations. This permitting action is shifting the range limit from 5.5 – 8.5 to 6.0 –9.0 standard units pursuant to a new Department rule found at Chapter 525(3)(III)(c). The new limits are considered BPT.

h. Total Phosphorus – This licensing action is establishing a 1/Week monitoring requirement for total phosphorus during the summer months (June – September). The information collected will assist the Department in its on-going modeling efforts to determine the assimilative capacity for total phosphorus on the main stem of the Penobscot River.

i. Whole Effluent Toxicity (WET) and Chemical Specific Testing Maine Law, 38 M.R.S.A., Sections 414-A and 420, prohibits the discharge of effluents containing substances in amounts which would cause the surface waters of the State to contain toxic substances above levels set forth in Federal Water Quality Criteria as established by the EPA. Department Rules, 06-096 CMR Chapter 530.5, *Surface Water Toxics Control Program*, set forth ambient water quality criteria (AWQC) for toxic pollutants and procedures necessary to control levels of toxic pollutants in surface waters.

WET and chemical specific (priority pollutant) testing, as required by Chapter 530.5, is included in order to fully characterize the effluent. This permit also provides for reconsideration of effluent limits and monitoring schedules after evaluation of toxicity testing results. The monitoring schedule includes consideration of results currently on file, the nature of the waste water, existing treatment and receiving water characteristics.

6. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (cont'd)

Secondary Treated Effluent:

WET monitoring is required to assess and protect against impacts upon water quality and designated uses caused by the aggregate effect of the discharge on specific aquatic organisms. Acute and chronic WET tests are performed on invertebrate and vertebrate species. Chemical specific, or "priority pollutant (PP)," testing is required to assess the levels of individual toxic pollutants in the discharge, comparing each pollutant to acute, chronic, and human health water quality criteria.

The Chapter 530.5 regulation places the Brewer facility in the high frequency category for WET testing as the facility is required to adopt a pretreatment program under federal regulations and in the high frequency testing category for chemical specific testing as they are permitted to discharge greater than 1.0 MGD.

A recent review of Brewer's data indicates that they have fulfilled the Chapter 530.5 testing requirements to date. See Attachment B of this Fact Sheet for a summary of the WET test results and Attachment C of this Fact Sheet for a summary of the chemical specific test dates.

Department Rule Chapter 530.5 and Protocol E(1) of a document entitled *Maine Department of Environmental Protection, Toxicity Program Implementation Protocols*, dated July 1998, states that statistical evaluations shall be periodically performed on the most recent 60 months of WET and chemical specific data for a given facility to determine if water quality based limitations must be included in the permit.

Chapter 530.5 §C(2) states when a discharge *"...contains pollutants at levels that have a reasonable potential to cause or contribute to an ambient excursion in excess of a numeric or narrative water quality criterion, appropriate water quality based limits must be established in the permit upon issuance."*

Chapter 530.5 §C(3) also states that if data indicates that a discharge is causing an exceedence of applicable AWQC, then*:"(1) the Department must notify the licensee of the exceedence; (2) the licensee must submit a toxicity reduction evaluation (TRE) plan for review and approval within 30 days of receipt of notice and implement the TRE after Department approval; (3) the Department must modify the waste discharge license to specify effluent limits and monitoring requirements necessary to control the level of pollutant and meet receiving water classification standards within 180 days of the Department's approval of the TRE."*

6. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (cont'd)

Secondary Treated Effluent:

On November 25, 2002, the Department conducted a statistical evaluation on the aforementioned tests results in accordance with the statistical approach outlined in EPA's March 1991 document entitled *Technical Support Document (TSD) for Water Quality Based Toxics Control*, Chapter 3.3.2 and Maine Department of Environmental Protection Guidance, July 1998, entitled *Toxicity Program Implementation Protocols*. The results of the 11/25/02 WET evaluation indicates that a 1/27/02 C-NOEL test result of 0.21% (most recent test) for the fathead minnow has a reasonable potential to exceed the critical chronic ambient water quality threshold of 0.21%. Therefore, in accordance with Chapter 530.5,§C(2), the Department is establishing a C-NOEL limit of 0.21% for the fathead minnow.

The Department establishes the testing frequency for WET or chemical specific parameters that exceed or have a reasonable potential to exceed ambient water quality thresholds/criteria taking into consideration the frequency, timing and severity of the tests results that are at issue. Being that this one WET test result is the only result of concern in the City's entire WET history, the Department has made a best professional judgment to maintain a surveillance level of testing for the fathead minnow.

The remaining WET species tested to date do not exceed or have a reasonable potential to exceed the critical acute or chronic water quality thresholds. Therefore, this permitting action is establishing a monitoring frequency of 1/Year until twelve months prior to the expiration date of the permit at which time the frequency reverts back to a screening level testing of 1/Quarter. See Special Condition A, *Effluent Limitations and Monitoring Requirements*, of the permit.

As for the chemical specific elements/compounds tested to date, the 11/25/02 statistical evaluation indicates no parameters exceed or have a reasonable potential to exceed the acute, chronic, or harmonic mean ambient water quality criteria. Therefore, this permitting action is establishing a surveillance level monitoring frequency of 1/Year until twelve months prior to the expiration date of the permit at which time the frequency reverts back to a screening level testing of 1/Quarter. See Special Condition A, *Effluent Limitations and Monitoring Requirements* of the permit.

6. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (cont'd)

Primary Treated Effluent:

For those excess combined sewer flows received at the treatment facility which are greater than that which can be treated to a secondary level of treatment, the Department has made a best professional judgment that primary treatment and disinfection constitutes appropriate and best practicable treatment. No limitations have been established for the waste stream as it is an internal waste stream at the facility. The secondary and primary treated waste waters (during wet weather events) are combined and then disinfected prior to entering the chlorine contact chamber.

The reporting requirements for the parameters in Special Condition A(2) of this permit (Flow, Surface Loading Rate, Overflow Occurrences and BOD5 and TSS percent removal rates are being carried forward from the previous licensing action. These are parameters the Department has deemed necessary to evaluate the performance of the primary treatment process.

7. ENDANGERED SPECIES ASSESSMENT (ESA)

Purpose: Section 7(a)(2) of the Endangered Species Act (ESA) requires federal agencies to ensure, in consultation with the U.S. Fish & Wildlife Service (USFWS) and National Marine Fisheries Service (NMFS), that actions an agency authorizes, funds or carries out are not likely to jeopardize the continued existence of federally listed endangered and threatened species, or result in the destruction or adverse modification of listed species' designated critical habitat. EPA believes that Section 7(a)(2) of the Endangered Species Act applies when EPA carries out actions approving State or Tribal water quality standards and NPDES permitting programs under the CWA.

ESA Designations: Two fish species are designated as endangered in Maine, Shortnose sturgeon (*Acipenser brevirostrum*) and Atlantic salmon *(Salmo salar)*.

Shortnose sturgeon - On June 30, 1978, a federally endangered shortnose sturgeon (*Acipenser brevirostrum*) was captured in the Penobscot River estuary during a Maine Department of Marine Resources sampling program (Squiers and Smith 1979). This capture indicates that a contemporary shortnose sturgeon population exists in the Penobscot River, as this capture occurred within the generation time of the species. While subsequent surveys have not resulted in the capture of additional shortnose sturgeon, the habitat in the Penobscot River is consistent with the preferred habitat of shortnose sturgeon. As such, any MEPDES permits issued in this river must ensure the adequate protection of this species as it is considered an indigenous species. Due to the presence of shortnose sturgeon in the Penobscot River, a biological assessment was prepared in 1993 regarding the renewal of NPDES

7. ENDANGERED SPECIES ASSESSMENT (ESA)(cont'd)

permits for five waste water dischargers to the Penobscot River including the Towns of Winterport and Bucksport, the Cities of Bangor and Brewer and for Champion International Paper Company, and the potential affects on Shortnose sturgeon. In 1995, the National

Marine Fisheries Service (NMFS) issued a biological opinion stating that issuance of those permits is not likely to adversely affect shortnose sturgeon provided permit conditions are not substantially changed and no new information reveals that these activities may affect listed species or their habitat.

Atlantic salmon – On November 17, 2000, the U.S. Fish and Wildlife Service and the National Marine Fisheries Service listed a distinct population segment (DPS) of Atlantic salmon *(Salmo salar)* in the Gulf of Maine including all naturally reproducing remnant populations of Atlantic salmon from the Kennebec River downstream of the former Edwards Dam site, northward to the mouth of the St. Croix River. Eight Maine rivers, including the the Dennys, East Machias, Machias, Pleasant, Narraguagus, Ducktrap, and Sheepscot Rivers and Cove Brook were noted as in the listing as rivers that still contain functioning wild salmon populations. Issuance of the Brewer permit would allow the continuation of the discharge of secondary and primary treated waste waters from the waste water treatment facility and untreated combined storm water/sanitary waste waters from seven combined sewer overflows (CSOs) outfalls to the Penobscot River which is within the ESA designated DPS Atlantic salmon region of the Gulf of Maine. More specifically, Cove Brook, a tributary that enters the Penobscot River below Brewer has been designated as sustaining a native population of Atlantic salmon.

Dilution of Effluent: The DEP has evaluated the dilution ratios for the discharge from the Brewer plant. See Section 6 (*Effluent Limitations & Monitoring Requirements*), sub§b (*Dilution Factors*) of the Fact Sheet for applicable calculations.

ESA Shortnose Sturgeon Consultation with National Marine Fisheries Service:
Since 1995, when NMFS issued a biological opinion stating that issuance of several permits for discharges to tidal portions of the Penobscot River was not likely to adversely affect shortnose sturgeon provided permit conditions are not substantially changed and since the Department is unaware of any new information which would suggest that this or other permit issuances in the area may affect shortnose sturgeon or their habitat, the Department has not requested a consultation with the National Marine Fisheries Service in regard to this permit issuance and its possible effect on the Shortnose sturgeon.

ESA Atlantic salmon Consultation with National Marine Fisheries Service:
Because the waste waters are not known to contain pollutants at concentrations which could be toxic to aquatic life, the Department believes that the action of issuance of the MEPDES permit for the continued discharge of treated waste water from the Brewer waste water treatment facility will not significantly affect the habitat or endanger the Gulf of Maine DPS of Atlantic salmon. Thus, the Department has not requested a consultation with the National

7. ENDANGERED SPECIES ASSESSMENT (ESA)(cont'd)

Marine Fisheries Service in regard to this permit issuance and its possible effect on Atlantic salmon. In accord with that determination, the Department sent a copy of the draft permit and Fact Sheet to the Protected Resources Division of the Northeast Regional Office of NMFS for comment should there be any concern with Department's determination. NMFS

is in agreement with this practice. The NMFS submitted two letters in March of 2003 commenting on the draft MEPDES permit. See Section 11 of this Fact Sheet (*Response to Comments*) for a discussion of the issues raised and remedies.

8. PRETREATMENT

The permittee is required to administer a pretreatment program based on the authority granted under Federal regulations 40 CFR §122.44(j), 40 CFR Part 403 and section 307 of the Federal Water Pollution Control Act (Clean Water Act) and Department rule Chapter 528, *Pretreatment Program*. The permittee's pretreatment program received EPA approval on January 15, 1985**,** and as a result, appropriate pretreatment program requirements were incorporated into the previous National Pollutant Discharge Elimination System (NPDES) permit which were consistent with that approval and federal pretreatment regulations in effect when the permit was issued. Since issuance of the previous NPDES permit, the State of Maine has been authorized by the EPA to administer the federal pretreatment program as part of receiving authorization to administer the NPDES program.

Upon issuance of this MEPDES permit, the permittee is obligated to modify (if applicable) its pretreatment program to be consistent with current federal regulations and State rules. Those activities that the permittee must address include, but are not limited to, the following: (1) develop and enforce Department approved specific effluent limits (technically-based local limits - last approved by the EPA on February 4, 2002; (2) revise the local sewer-use ordinance or regulation, as appropriate, to be consistent with federal regulations and State rules; (3) develop an enforcement response plan; (4) implement a slug control evaluation program; (5) track significant non-compliance for industrial users; and (6) establish a definition of and track significant industrial users.

These requirements are necessary to ensure continued compliance with the POTW's MEPDES permit and its sludge use or disposal practices.

In addition to the requirements described above, this permit requires that within 180 days of the permit's effective date, the permittee shall submit to the Department in writing, a description of proposed changes to permittee's pretreatment program deemed necessary to assure conformity with current federal and State pretreatment regulations and rules respectively. These requirements are included in the permit (Special Condition N) to ensure that the pretreatment program is consistent and up-to-date with all pretreatment requirements in effect. Lastly, by March 1st of each calendar year, the permittee must submit a pretreatment report detailing the activities of the program for the twelve month period ending 60 days prior to the due date.

9. DISCHARGE IMPACT ON RECEIVING WATER QUALITY

The Department acknowledges that the elimination of the seven CSO’s in the collection system and the secondary bypass (primary treated only) of sanitary wastewater is a costly long term project. As the City’s sewer collection system is upgraded and maintained in according to the CSO Master Plan and Nine Minimum Controls, there should be reductions in the frequency and volume of CSO activities and in the waste water receiving primary

treatment only at the treatment plant and over time, improvement in the quality of the waste water discharge to the receiving waters over time. As permitted, the Department of Environmental Protection has determined the existing water uses will be maintained and protected.

It is noted however that if water quality modeling (once completed) indicates the City of Brewer's discharge is causing or contributing to the non-attainment of dissolved oxygen standards below Bangor and Brewer, this permit will be reopened per Special Condition M, *Reopening of Permit For Modifications*, to impose more stringent limitations and or monitoring requirements to meet all applicable water quality standards.

The effluent limitations in this permit are equal to or more stringent than the limits in the previous license and/or effective NPDES permit.

10. PUBLIC COMMENTS

Public notice of this application was made in the Bangor Daily News newspaper on or about January 4, 2001. The Department receives public comments on an application until the date a final agency action is taken on that application. Those persons receiving copies of draft permits shall have at least 30 days in which to submit comments on the draft or to request a public hearing, pursuant to Chapter 522 of the Department's rules.

10. DEPARTMENT CONTACTS

Additional information concerning this permitting action may be obtained from and written comments should be sent to:

Gregg Wood
Division of Water Resource Regulation
Bureau of Land and Water Quality
Department of Environmental Protection
17 State House Station
Augusta, Maine 04333-0017 Telephone: (207) 287-7693

11. RESPONSE TO COMMENTS

During the period of February 14, 2003 through March 14, 2003, the Department solicited comments on the proposed draft Maine Pollutant Discharge Elimination System Permit to be issued to the City of Brewer for the proposed discharge(s). The Department received letters from the National Marine Fisheries Services (NMFS) dated March 6, 2003 and March 20, 2003. In addition to the letters, personnel from the Department's MEPDES permitting section and personnel from NMFS' Gloucester, Massachusetts and Orono,

Maine's offices held a conference call on April 3, 2003, to discuss issues raised in said letters A response to their comment(s) is as follows:

Comment #1: Shortnose sturgeon - The NMFS has indicated that a federally endangered shortnose sturgeon was captured in Northport, Maine on June 30, 1978, but directed studies to document whether shortnose sturgeon are present in the river since then have been unsuccessful. However, the habitat in the Penobscot River is consistent with the preferred habitat of shortnose sturgeon in other river systems. In addition, the NMFS has designated Cove Brook, a tributary that enters the Penobscot River below Brewer, as sustaining a native population of Atlantic salmon. Due to the location of the discharge outfalls and potential presence of shortnose sturgeon and the presence of the Gulf of Maine DPS Atlantic salmon in the vicinity of the Brewer waste water treatment facility, the NMFS has requested the permit include an assessment of the impacts of the discharges on endagered species in the Fact Sheet of the permit.

In addition to incorporating the assessment into the Fact Sheet of the permit, the NMFS indicated it would benefit them in an on-going assessment of the potential impacts on the two endangered species to require the City of Brewer to submit a copy of the monthly Discharge Monitoring Reports (DMRs), the *CSO Activity's and Volumes* submissions (Attachment D of the permit) and the annual *CSO Progress Reports* [Special Condition L(8) of the permit) to the Endangered Species Coordinator of the NMFS.

Response #1: The Department has incorporated an assessment of the impacts of the discharges on endagered species in the Fact Sheet (Section 7 entitled*, Endangered Species Assessment*) as requested by the NMFS. The assessment concludes, based on a 1995 biological opinion by the NMFS, that the continued discharge of primary and secondary treated waste waters from the Brewer waste water treatment facility and seven combined sewer overflow outfalls will not significantly affect the habitat of the shortnose sturgeon or the Gulf of Maine DPS Atlantic salmon.

In addition to incorporating the assessment into the Fact Sheet of the permit, the final permit has been modified to require the City of Brewer to submit a copy of the monthly Discharge Monitoring Reports (DMRs), the *CSO Activity's and Volumes* submissions (Attachment D of the permit) and the annual CSO Progress Reports [Special Condition L(8) of the permit) to the Endangered Species Coordinator of the NMFS.